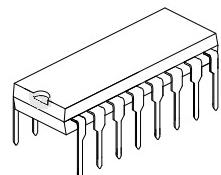


TA7640AP**LINEAR INTEGRATED CIRCUIT****AM/FM IF PROCESSOR****■ DESCRIPTION**

The UTC TA7640AP is a monolithic integrated circuit designed for the radios cassette tape recorder.

■ FEATURES

- * Low operating current
- * Low external component
- * Internal AM/FM switch
- * Wide operating voltage: $V_{CC}=3.8V$

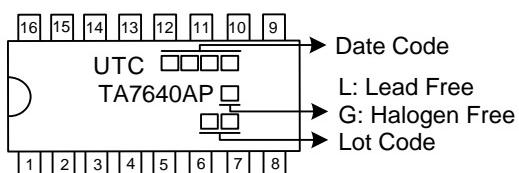


DIP-16

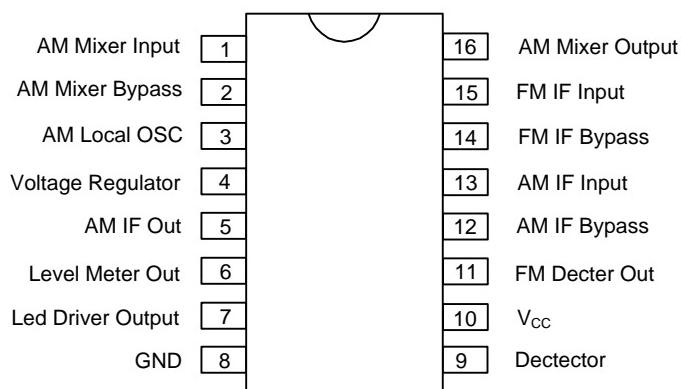
■ ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
TA7640AP-D16-T	TA7640APL-D16-T	DIP-16	Tube

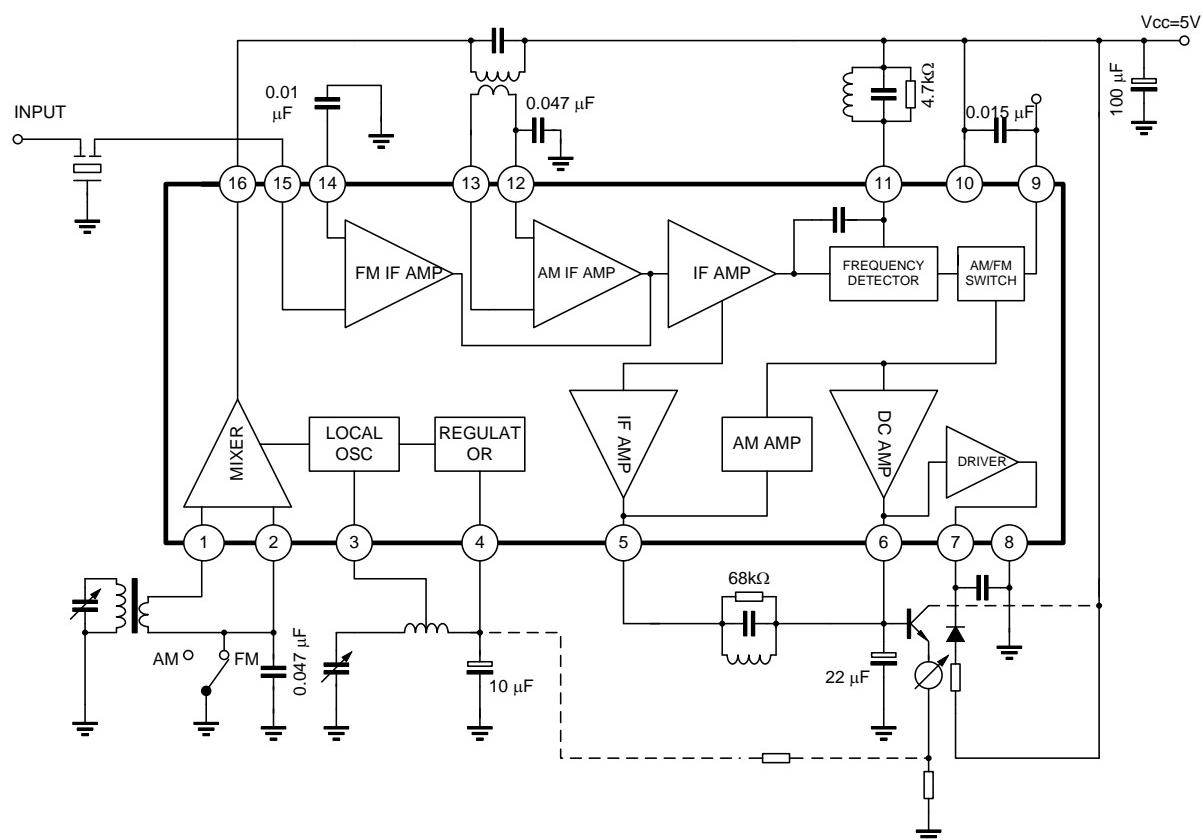
TA7640APG-D16-T	(1)Packing Type (2)Package Type (3)Green Package	(1) T: Tube (2) D16: DIP-16 (3) G: Halogen Free and Lead Free, L: Lead Free
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■ MARKING

■ PIN CONFIGURATION



■ BLOCK DIAGRAM



TA7640AP

LINEAR INTEGRATED CIRCUIT

■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Voltage	V_{CC}	8	V
Led Driving Current	I_{LAMP}	10	mA
Power Dissipation	P_D	750	mW
Operating Temperature	T_{OPR}	-25 ~+75	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55--+150	$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ DC ELECTRICAL CHARACTERISTICS ($V_{CC}=5\text{V}$)

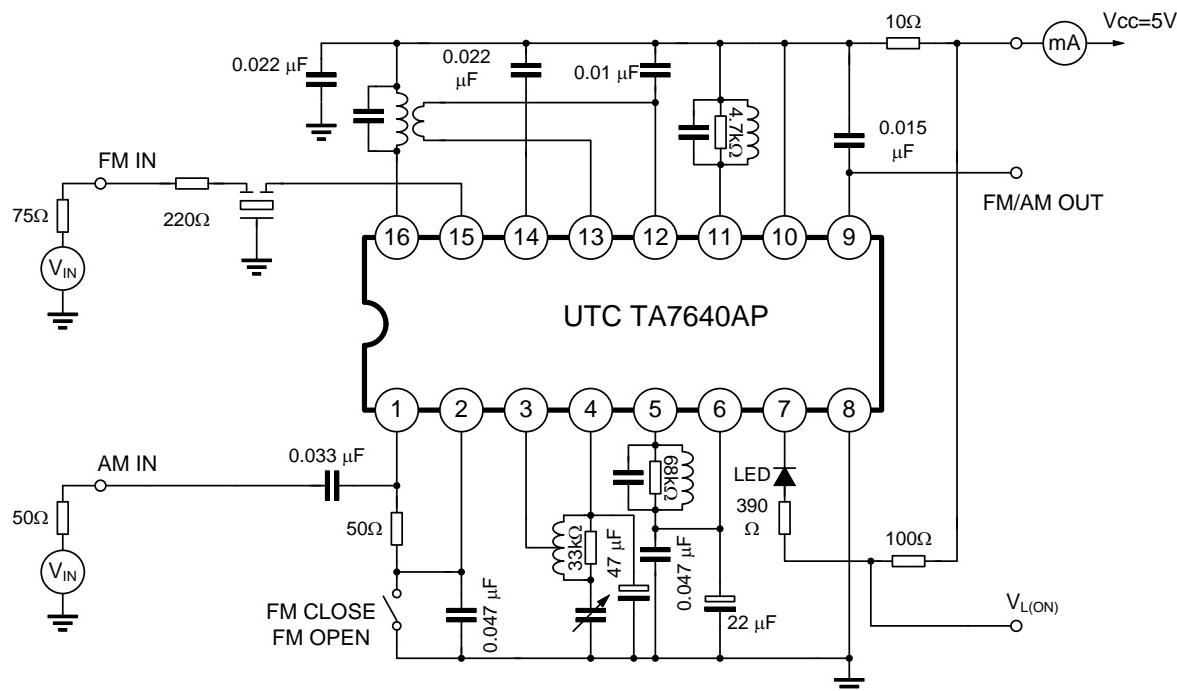
PARAMETER	SYMBOL	TYP		UNIT
		AM	FM	
Pin 1 AM Mixer Input	V_1	1.5	0	V
Pin 2 AM Mixer Bypass	V_2	1.5	0	V
Pin 3 AM Local OSC	V_3	2.3	2.3	V
Pin 4 Voltage Regulator	V_4	2.3	2.3	V
Pin 5 AM IF Out	V_5	1	0.9	V
Pin 6 Level Meter Out	V_6	1	0.9	V
Pin 7 Led Driver Output	V_7			V
Pin 8 GND	V_8	0	0	V
Pin 9 Detector	V_9	1.4	1.5	V
Pin 10 Vcc	V_{10}	5	5	V
Pin 11 FM Decter Out	V_{11}	5	5	V
Pin 12 AM IF Bypass	V_{12}	1.5	1.5	V
Pin 13 AM IF Input	V_{13}	1.5	1.5	V
Pin 14 FM IF Bypass	V_{14}	1.5	1.5	V
Pin 15 FM IF Input	V_{15}	1.5	1.5	V
Pin 16 AM Mixer Output	V_{16}	5	5	V

■ AC ELECTRICAL CHARACTERISTICS

($T_A=25^\circ\text{C}$, $V_{CC}=5\text{V}$, FM; $f=10.7\text{MHz}$, $\Delta f=22.5\text{KHz}$, FM=400Hz AM; $f=1\text{MHz}$, Mod=30%, FM=400Hz)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Current	$I_{CC(1)}$	FM $V_{IN}=0$		10	15	mA
	$I_{CC(2)}$	AM $V_{IN}=0$		7	10	
FM						
Input Limiting Voltage	$V_{IN(LIMIT)}$	-3dB		40	46	$\text{dB}\mu$
Detector Output	$V_{OD(FM)}$	$V_{IN}=66\text{dB}\mu$	57	85	114	mVrms
Signal Noise Ratio	S/N	$V_{IN}=80\text{dB}\mu$		65		dB
Total Harmonic Distortion	THD	$V_{IN}=80\text{dB}\mu$		0.05		%
AM Rejection	AMR	$V_{IN}=80\text{dB}\mu$		38		$\text{dB}\mu$
Level Meter Driving Voltage	V_M	$V_{IN}=100\text{dB}\mu$	1.6	1.75	1.9	V
Led Driving Sensitivity	V_L	$I_L=1\text{mA}$		46	52	dB
AM						
Gain	G_V	$V_{IN}=26\text{dB}\mu$	20	30	60	mVrms
Detector Output Voltage	$V_{OD(AM)}$	$V_{IN}=60\text{dB}\mu$	65	95	125	mVrms
Signal To Noise Ratio	S/N	$V_{IN}=60\text{dB}\mu$		47		dB
Total Harmonic Distortion	THD	$V_{IN}=60\text{dB}\mu$		1		%
Signal Meter Output	V_M	$V_{IN}=100\text{dB}\mu$	1.6	1.75	1.9	V
Level Meter Driving Voltage	V_L	$I_L=1\text{mA}$		32		$\text{dB}\mu$
Oscillation Stop Voltage	V_{OSC}	$RDUMP=\infty$		1.5		V
Pin 5 Output Impedance	R09	$f=1\text{KHZ}$		3		$\text{K}\Omega$

■ TEST CIRCUIT



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